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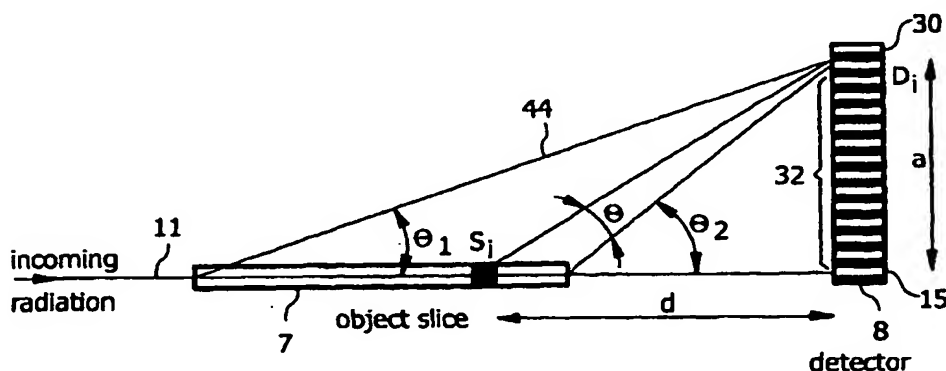
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(54) Title: **COHERENT-SCATTER COMPUTED TOMOGRAPHY**



(57) Abstract: Known reconstruction techniques from coherent scattered x-rays apply non-exact reconstruction techniques. According to the present invention, a relatively wide spectrum of wave-vector transfers  $q$  of the scattered x-ray photons is acquired. The projection data is interpreted as line integrals in the  $x$   $y$ - $q$  space and the projection data is resorted to correspond to an acquisition along any source trajectory. Due to this, an exact helical reconstruction algorithms may be applied and redundant data may be used to obtain a better image quality.